

DECLARATION

IN REISSUE APPLICATION

Attorney Docket No.

C196.012-006

SPECIFICATION AND INVENTORSHIP IDENTIFICATION

As a below named inventor, I declare that:

1. I am a citizen of United States of America, now residing at Tarzana, California.
2. I believe that I am the original, first and sole inventor of the invention described and claims in U.S. Patent No. 5,476,193, issued December 19, 1995, and in this reissue application.
3. I have reviewed and understand the contents of the above identified specification, including the claims. I acknowledge the duty to disclose information which is known to me to be material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.
4. I believe U.S. Patent 5,476,193 is partly inoperative by reason that I did not claim my invention in claims of the scope to which I am entitled and in terms fully defining its intended scope. As a result, I claimed less in my U.S. Patent 5,476,193 than I had a right to claim.
5. My invention relates to a dispensing apparatus which controls the flow and mixing of two liquids. This type of dispensing apparatus is primarily used in post-mix beverage dispensers in which one liquid is non-viscous, such as soda (i.e., water which is saturated with carbon dioxide), and the other liquid is a concentrate, such as a flavored syrup.
6. In my U.S. Patent 5,476,193, the dispensing apparatus dispenses predetermined volumes of syrup and soda which are intermixed within a nozzle. The preferred embodiment of the apparatus, as shown and described in my patent, has a valve body 44 with a soda inlet 40 and a syrup inlet 42. Within the valve body 44 is a group of components which I refer to as a soda section (or side) and another group of components which I refer to as a syrup section (or side). The soda section and the syrup section each have a separate drive piston. In the Figures, the soda piston is element 120, and the syrup piston is element 142. The two pistons 120 and 142 are connected together (by stem 140) so as to operate simultaneously in a forward and reverse direction. A single solenoid 12 acts as an on/off control to activate and deactivate the dispensing apparatus. Activation of the solenoid allows soda to be applied under pressure alternately to opposite sides of the soda piston 120. This causes reciprocating movement of soda piston 120 and syrup piston 142. As the pistons move back and forth within their respective chambers, dispensing of syrup and soda occurs in a precise, preestablished ratio.

7. The control of movement of the soda piston is powered by soda pressure. In the preferred embodiment of my invention shown in Figures 1 and 2, the piston drive control includes a three-way valve formed by valve piston 48, valve piston 60, and valve piston 64. The piston drive control also includes a pair of valve pistons 76 and 80, and a pair of slide pistons 100 and 104 which are connected together by stem 112. These pistons, together with the associated fluid channels and passageways, connect the soda inlet 40 to the opposite ends of the soda chamber, and also connect the ends of the soda chamber to a passageway leading to nozzle 10.

8. As originally filed, my patent application contained 6 claims. Original claim 1 read as follows:

"A beverage dispenser apparatus for dispensing through a nozzle a preestablished volume of a syrup and a preestablished volume of soda to be intermixed within said nozzle, both said syrup and said soda being supplied from separate sources under pressure, said beverage dispensing apparatus comprising:

a syrup side utilizing a first drive piston, movement of which causes dispensing of said preestablished volume of syrup into said nozzle, said first drive piston being movable in both a forward and reverse direction within a syrup drive piston chamber, said syrup in said preestablished volume to be dispensed during movement of said first drive piston in said forward direction and also during movement in said reverse direction; and

a soda side utilizing a second drive piston, movement of which causes dispensing of said preestablished volume of soda into said nozzle, said second drive piston being movable in both said forward and said reverse direction within a soda drive piston chamber, soda in said preestablished volume to be dispensed during movement of said second drive piston in said forward direction and also during movement in said reverse direction, said soda drive piston chamber being spaced from said syrup drive piston chamber."

Original dependent claim 3 depended from claim 1 and stated that the soda side included a pair of slide pistons (such as slide pistons 100 and 104). Original dependent claim 6 also depended from claim 1 and added that the soda side included a three-way valve (such as the three-way valve formed by pistons 48, 60 and 64).

9. In an Office Action dated April 25, 1995, original claims 1-6 of my patent application were rejected. In response to that Office Action, my patent agent, Jack C. Munro, filed an Amendment on June 5, 1995. In that Amendment, original claim 1 was amended to incorporate the slide piston feature of original claim 3. Claim 6 was rewritten in independent form, and included

the three-way valve as a part of the soda side. New claims were also added and original claim 3 was cancelled.

10. On August 10, 1995, claims 1, 2, and 4-9, as amended, were allowed.

11. As a result of the Amendment, the scope of the claims was changed from a single generic and very broad independent claim (claim 1) to two independent claims, each of which included details of the soda side of my dispensing apparatus. Neither of the two independent claims, which are now claims 1 and 7 of my patent, is generic.

12. I believe that I was and I am entitled to patent protection which is generic to a dispensing apparatus with slide pistons as described in independent claim 1, or with a three-way valve, as described in independent claim 7 of my patent. This generic patent protection is narrower in scope than original claim 1, but broader in scope than either claim 1 or claim 7 of my patent.

13. In particular, I believe that the errors in not claiming my invention to its full extent, and without unnecessarily limiting language, resulted from my lack of familiarity with a details of the patent process, and with the failure of my patent agent to present generic claims which are narrower than original claim 1, but broader than claims 1 and 7 of my patent. I believe that the failure to seek a generic claim which is narrower in scope than original claim 1, but broader in scope than claims 1 and 7 of my issued patent, was an error made by my patent agent without any deceptive intent. I believe it was the result of an oversight on his part during the course of prosecuting my patent application. In addition, my patent agent and I failed to explore the possibility of alternative ways of describing my invention which are consistent with the preferred embodiment which I disclosed and consistent with the summary and the objectives of my invention which are set forth in my patent.

14. I personally did not appreciate that there was an error in obtaining claims encompassing the full scope of my invention until about March of 1997. At that time, I learned from discussions with representatives of the Cornelius Company, and with my patent attorney, that the claims of my patent may not fully encompass the subject matter described in my patent, including the subject matter recited in the Summary of the Invention section of my patent.

15. Specifically, the claims of my U.S. Patent 5,476,193 were in error because they did not include a generic claim which encompassed the features such as slide pistons and three-way valves which were the subject of independent claims 1 and 7 of my patent. In addition, they did not include claims which defined my invention in alternative language, which in some respects is more specific and detailed than claims 1-8 of my patent.

16. Upon my discovery of the error, I recognized that my invention could be defined in a number of different ways consistent with the basic concept which I invented. The invention could be claimed in more broad terms with respect to the piston drive control or shifting control which functions to direct the soda under pressure to alternate sides of the soda piston in order to cause reciprocal motion of the soda piston and the syrup piston. The description of that portion of my dispensing apparatus can be described more broadly than is described in either independent

claim 1 or independent claim 7. In addition, the components forming the soda section and the syrup section can be described in a much more detailed manner than is found in any of the existing claims 1-8 of my patent. Claims 9-39, which are submitted in this reissue application define my invention in somewhat different terms than original claims 1-8, and more completely claim what I consider to be my invention.

17. Independent claim 9 defines a beverage dispenser apparatus which includes a soda inlet, a syrup inlet, a syrup section, a soda section, and a piston drive control. Claim 9 differs from independent claims 1 and 7 by explicitly reciting the soda inlet and the syrup inlet. In addition, claim 9 includes a piston drive control connected between the soda inlet and the soda drive piston chamber, and powered by soda pressure. The piston drive control has an on state in which soda under pressure is routed to alternate sides of the second drive piston to cause reciprocal motion of the first and second drive pistons, and an off state in which soda under pressure is routed to prevent movement of the first and second drive pistons. The piston drive control, is, therefore, generic to the slide piston feature recited as a part of claim 1 and the three-way valve recited as part of independent claim 7. In the preferred embodiment of my invention which is shown in Figures 1 and 2 of my patent, both the three-way valve and the slide pistons form a part of the "piston drive control" defined in independent claim 9.

18. Claims 10-18 are dependent claims which depend from independent claim 9. Specifically, dependent claim 10 and 11 deal with the first and second slide pistons, which preferably form a part of the piston drive control.

19. Dependent claims 12 and 13 define the piston drive control and the soda section in more detail. Claim 12 specifies first and second soda inlet valves, which in the preferred embodiment are formed by pistons 60 and 64 of the three-way valve. Claim 13 recites the first and second soda outlet valves, which are preferably formed by pistons 76 and 80 in the preferred embodiment.

20. Dependent claim 14 depends from claim 13 and recites first and second valves for switching fluid connection. These two valves include slide pistons 100 and 104 in the preferred embodiment.

21. Dependent claims 15-17 all are related to further details of the syrup section. Claim 18 includes an on/off control, which in a preferred embodiment is the "single dispensing solenoid" referred to in dependent claim 4.

22. Independent claim 19 defines a dispensing valve for dispensing from a nozzle a predetermined volume of a first liquid and a predetermined volume of a second liquid. Claim 19 defines a valve body with a first section and a second section, together with a fluid powered shifting control. Among the components of the fluid powered shifting control are first and second slide pistons (which are preferably slide pistons 100 and 104). The fluid powered shifting control also contains a first liquid inlet valve, a first flow channel, a second flow channel an outlet channel, a first valve piston, a second valve piston, and a plurality of first fluid passageways. All of the components of the fluid powered shifting control are shown in Figures 1 and 2 as part of the soda section.

23. Dependent claims 20-24 define further details of the dispensing valve. Claim 20 adds a plurality of check valves and a plurality of second fluid passageways. In the preferred embodiments, the plurality of check valves include check valves 154, 156, 160 and 162 in Figures 1 and 2. These components are part of the syrup section of the preferred embodiment.

24. Dependent claim 21 depends from claim 20 and includes the solenoid valve. Claim 22 depends from claim 21 and includes a demand regulator, which forms a part of the syrup side.

25. Dependent claims 23 and 24 are similar to claims 21 and 22, except that each depends directly from independent claim 19.

26. Independent claim 25 define a dispensing valve which includes a valve body and a first and second sections and a fluid powered shifting system. The fluid powered shifting system includes first and second slide pistons, a first liquid inlet valve, an outlet flow channel and a plurality of first fluid passageways.

27. Dependent claims 26-31 all depend ultimately from independent claim 25 and add further elements. Dependent claim 26 depends from claim 25 and includes a first valve and a second valve.

28. Dependent claim 27 depends from claim 26 and adds a second fluid control system including a plurality of check valves and a plurality of second fluid passageways. In the preferred embodiment shown in my patent, this second fluid control system is a part of the syrup section of the valve.

29. Claim 28 is a dependent claim which depends from claim 27. It adds the solenoid valve feature of my invention.

30. Claim 29 depends from claim 28 and adds the demand regulator, which is part of the syrup section in the preferred embodiment of my invention.

31. Dependent claims 30, 31 and 32 are similar to dependent claims 27, 28 and 29, except that they depend directly on claim 25.

32. Independent claim 33 defines a beverage dispenser apparatus which includes a valve body, a syrup inlet, a syrup chamber, a syrup piston (which is movable in the syrup chamber), means for connecting the syrup inlet and the first and second ends of the syrup chamber, means for connecting the first and second ends of the syrup chamber and nozzle, a soda inlet, a soda chamber, a soda piston (which is movable in the soda chamber and is connected to the syrup piston), and a piston drive control.

33. Dependent claims 34-40 add further details to the beverage dispensing apparatus recited in independent claim 33. Dependent claims 34-38 all deal with aspects of the piston drive control. Claims 34 and 35 relate to the first and second slide pistons; claim 36 relates to the

first and second soda inlet valves; and claim 37 deals with first and second soda outlet valves. Claim 38 depends through claims 37 and 36 on claim 33. It recites "first and second valves", which in a preferred embodiment are formed by first and second slide pistons.

34. Dependent claim 39 depends on claim 33 and adds a demand regulator connected between the syrup inlet and the syrup chamber.

35. Dependent claim 40 depends on claim 33 and adds an on/off control.

36. I believe that my claiming less than I had a right to claim in my U.S. Patent 5,474,193 rose without any deceptive intent on my part.

37. All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further, these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

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